

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.-10. (Cancelled)

11. (New) In a cellular telephony system, a method for communicating between at least first and second mobile stations, said mobile stations each comprising a first radio communicator interfacing a cellular network, operating on at least one cellular frequency band for transmitting and receiving calls through said network, said first and second mobile stations each having a second radio communicator operating on a different frequency band and separated from cellular frequency bands, said second radio communicator transmitting and receiving calls through direct communication between at least two of said cellular mobile stations, said mobile stations switching between said first and said second radio communicator for transferring calls between cellular frequency bands and said different frequency band upon a command, wherein the method for communicating comprises:

determining via said second radio communicator a mutual carrier wave within said different frequency band available for transmitting and receiving a modulated call between said first and second mobile stations;

measuring signal strength parameters for ensuring the signal quality;

deciding, based on whether the available frequency has a signal quality sufficient to allow a direct mobile station-to-mobile station radio communication link between the first and second mobile stations, whether to connect the call via the direct mobile station-to-mobile station radio communication link; and

establishing a direct connection for the call between said first and second mobile stations, thereby extending call capacity of the cellular network.

12. (New) A method according to claim 11, further comprising deciding, based on whether the available frequency has a signal quality sufficient to allow a direct communication between the first and second mobile stations and, after the mobile cellular call is in progress, to re-route the call to the direct mobile station-to-mobile station radio communication link.

13. (New) A method according to claim 11, further comprising deciding, based on inherent knowledge possessed by the cellular network, whether there is a free frequency available to allow a direct communication between the first and second mobile stations and to re-route the call to the mobile network based on decision parameters in the cellular network itself.

14. (New) A method according to claim 12, further comprising deciding, based on inherent knowledge possessed by the cellular network, whether there is a free frequency available to allow a direct communication between the first and second mobile stations and to re-route the call to the mobile network based on decision parameters in the cellular network itself.

15. (New) A method according to claim 11, further comprising using the mobile stations' direct mobile station-to-mobile station communication pathways as intermediate transmission links for re-transmitting the information received based on a provided address tag attached to each information packet to increase efficiency of the cellular network.

16. (New) A method according to claim 15, further comprising increasing efficiency via load sharing.

17. (New) A method according to claim 11, further comprising using each mobile station as an Internet router that receives that re-transmits information based on rules provided by the Internet Protocol (IP).

18. (New) A method according claim 11, further comprising supervising the transmission of relevant information between mobile stations rather than having the information transferred through the cellular network.

19. (New) A method according to claim 11, further comprising:
breaking down call data into standardized size information packets; and
sending, based on a destination address from the call data, individual data packets as separate information blocks using the direct mobile station-to-mobile station communication capability together with data transmission capabilities of the cellular network, thereby using both communication links for a single telephone call.

20. (New) A method according to claim 11, further comprising after a call is in progress, randomly or at predetermined intervals in time, causing the first mobile station to determine over the direct mobile station-to-mobile state radio communication link or interface whether there is a free frequency available as well as a sufficient signal quality to allow for direct communication between the first and second mobile stations.

21. (New) A method according to claim 20, further comprising when the second mobile station positively, re-routing the call to the direct mobile station-to-mobile station communication link and terminating the initial connection, thereby freeing capacity of the cellular network.

22. (New) A method according to claim 11, further comprising after a call is in progress, in response to a user input, causing the first mobile station to determine over the direct mobile station-to-mobile state radio communication link or interface whether there is a free frequency available as well as a sufficient signal quality to allow for direct communication between the first and second mobile stations.

23. (New) A method according to claim 11, further comprising re-routing a call between the first and second mobile stations initiated on the direct mobile station-to-mobile station communication link to the cellular frequency band of the cellular network.

24. (New) A method according to claim 11, further comprising changing between the direct mobile station-to-mobile station communication link to and cellular frequency band of the cellular network one or more time during a single phone call.

25. (New) A cellular telephony system including at least first and second mobile stations, said mobile stations each comprising a first radio communicator interfacing a cellular network, operating on at least one cellular frequency band for transmitting and receiving calls through said network, said first and second mobile stations each having a second radio

communicator operating on a different frequency band and separated from cellular frequency bands, said second radio communicator transmitting and receiving calls through direct communication between at least two of said cellular mobile stations, said mobile stations switching between said first and said second radio communicator for transferring calls between cellular frequency bands and said different frequency band upon a command, wherein the cellular telephony system comprises communication routing programmed logic circuitry configured to:

determine via said second radio communicator a mutual carrier wave within said different frequency band available for transmitting and receiving a modulated call between said first and second mobile stations;

measure signal strength parameters for ensuring the signal quality;

decide, based on whether the available frequency has a signal quality sufficient to allow a direct mobile station-to-mobile station radio communication link between the first and second mobile stations, whether to connect the call via the direct mobile station-to-mobile station radio communication link; and

establish a direct connection for the call between said first and second mobile stations, thereby extending call capacity of the cellular network.

26. (New) The system of claim 25, wherein the communication routing programmed logic circuitry is further configured to decide, based on whether the available frequency has a signal quality sufficient to allow a direct communication between the first and second mobile stations and, after the mobile cellular call is in progress, to re-route the call to the direct mobile station-to-mobile station radio communication link.

27. (New) The system of claim 25, wherein the communication routing programmed logic circuitry is further configured to decide, based on inherent knowledge possessed by the cellular network, whether there is a free frequency available to allow a direct communication between the first and second mobile stations and to re-route the call to the mobile network based on decision parameters in the cellular network itself.

28. (New) The system of claim 26, wherein the communication routing programmed logic circuitry is further configured to decide, based on inherent knowledge possessed by the cellular network, whether there is a free frequency available to allow a direct communication between the first and second mobile stations and to re-route the call to the mobile network based on decision parameters in the cellular network itself.

29. (New) The system of claim 25, wherein the communication routing programmed logic circuitry is further configured to use the mobile stations' direct mobile station-to-mobile station communication pathways as intermediate transmission links for re-transmitting the information received based on a provided address tag attached to each information packet to increase efficiency of the cellular network.

30. (New) The system of claim 29, wherein the communication routing programmed logic circuitry is further configured to increase efficiency via load sharing.

31. (New) The system of claim 25, wherein the communication routing programmed logic circuitry is further configured to use each mobile station as an Internet router that receives that re-transmits information based on rules provided by the Internet Protocol (IP).

32. (New) The system of claim 25, wherein the communication routing programmed logic circuitry is further configured to supervise the transmission of relevant information between mobile stations rather than having the information transferred through the cellular network.

33. (New) The system of claim 25, wherein the communication routing programmed logic circuitry is further configured to (a) break down call data into standardized size information packets; and (b) send, based on a destination address from the call data, individual data packets as separate information blocks using the direct mobile station-to-mobile station communication capability together with data transmission capabilities of the cellular network, thereby using both communication links for a single telephone call.

34. (New) The system of claim 25, wherein the communication routing programmed logic circuitry is further configured to cause, after a call is in progress, randomly or at predetermined intervals in time, the first mobile station to determine over the direct mobile station-to-mobile state radio communication link or interface whether there is a free frequency available as well as a sufficient signal quality to allow for direct communication between the first and second mobile stations.

35. (New) The system of claim 34, wherein the communication routing programmed logic circuitry is further configured to re-route, when the second mobile station positively, the call to the direct mobile station-to-mobile station communication link and terminating the initial connection, thereby freeing capacity of the cellular network.

36. (New) The system of claim 25, wherein the communication routing programmed logic circuitry is further configured to cause, after a call is in progress, in response to a user input, the first mobile station to determine over the direct mobile station-to-mobile state radio communication link or interface whether there is a free frequency available as well as a sufficient signal quality to allow for direct communication between the first and second mobile stations.

37. (New) The system of claim 25, wherein the communication routing programmed logic circuitry is further configured to re-route a call between the first and second mobile stations initiated on the direct mobile station-to-mobile station communication link to the cellular frequency band of the cellular network

38. (New) The system of claim 25, wherein the communication routing programmed logic circuitry is further configured to change between the direct mobile station-to-mobile station communication link to and cellular frequency band of the cellular network one or more time during a single phone call.